



February 8, 2017

Mr. Richard R. Schrubbe
Director, Corporate and Benefits Accounting
Xcel Energy Inc.
414 Nicollet Mall
Minneapolis, MN 55401

Subject: 2017 Benefit Costs and 2018–2022 Benefit Cost Estimates

Dear Rick:

Attached are 2017 costs and 2018-2022 budget estimates based on the final year-end 2016 asset values and disclosure assumptions described in our February 3, 2017 letter. Workers Compensation and Long-Term Disability results are preliminary and will be finalized in May.

SUMMARY OF KEY RESULTS

The key changes from our forecast originally provided on May 13, 2016 are as follows:

- Benefit Costs reflect final 2017 assumptions:
 - Discount rates decreased approximately 0.53%, on average, from the 4.66% average assumption used in the May 13, 2016 estimates to 4.13% at December 31, 2016.
 - Career average salary scale assumption decreased from 4.00% to 3.75%
 - Mortality assumption reflects additional data through 2014 which generally lowered the rate of mortality improvements
- Contributions have been increased from \$125 million per year to \$150 million per year
- Actual 2016 pension asset returns were 6.06% compared to an expected return of 6.87% and actual retiree medical asset returns were 4.73% compared to an expected return of 5.80%.
- Participant data has been updated to reflect known status and pay changes through November 30, 2016, expected December 2016 retirements, and benefit distributions related to the 2016 deferred vested participant lump sum offering.

Benefit Cost Results (prior to regulatory deferrals)

Cost/(Income) (\$ in Millions)	2016 Actual	2017 Cost May 13, 2016 Estimate	2017 Cost February 8, 2017 ¹
Qualified Pension Plans ²	\$120.6	\$114.7	\$122.4
Nonqualified Pension Plans ³	7.9	6.2	6.8
Retiree Medical & Life Insurance Plan	(3.8)	(4.4)	(2.8)
Workers' Compensation	1.1	0.5	0.9
Long-Term Disability	(0.7)	0.6	1.0
Total	\$125.1	\$117.6	\$128.3
Discount Rate	4.34%-4.73%	4.34%-4.73%	3.95%-4.25%

¹ Workers Compensation and Long-Term Disability costs are preliminary, final results will be provided in May.

² Qualified Pension Plan costs reflect the assumption that NSP-MN and Xcel Energy Nuclear costs are determined under the Aggregate Cost Compensation Method. No additional regulatory deferrals have been reflected. See Exhibit VII for additional details.

³ Includes 2016 settlement charge related to Mr. Connelly's payments and anticipated 2017 settlement charge related to expected payments of \$3.0 million.

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The following provides a reconciliation of cost (prior to regulatory deferrals) between the estimated 2016 cost provided in our May 13, 2016 letter, the 2017 budget estimates provided in our December 6, 2016 PTAC presentation and the 2017 costs provided in this letter (\$ in millions):

	Qualified Pension ¹	Non-qualified Pension ⁷	Retiree Medical	Workers' Compensation	Long Term Disability	Total
Initial 2017 Estimate (May 13, 2016)	\$114.7	\$6.2	(\$4.4)	\$0.5	\$0.6	\$117.6
Estimated demographic experience ²	1.9	0.6	0.4	0.0	0.0	2.9
Decrease salary increase assumption ³	(3.4)	(0.1)	0.0	0.0	0.0	(3.5)
Extend "greater-of" for NSP bargaining contract	0.3	0.0	0.0	0.0	0.0	0.3
Mortality assumption	(2.9)	(0.1)	(0.6)	0.0	0.0	(3.6)
Updated retiree claims and participant contributions ⁴	0.0	0.0	1.3	0.0	0.0	1.3
Discount rates ⁵	9.8	0.1	0.9	0.5	0.5	11.8
Estimated 2016 asset performance ⁶	2.2	0.0	(0.3)	0.0	0.0	1.9
Pension contributions increased from \$125M to \$150M	(1.0)	0.0	0.0	0.0	0.0	(1.0)
Updated 2017 Estimate (December 6, 2016)	\$121.6	\$6.7	(\$2.7)	\$1.0	\$1.1	\$127.7
Final demographic experience ⁸	3.5	0.1	(0.2)	0.0	0.0	3.4
Final discount rates	(1.0)	0.0	(0.1)	(0.1)	(0.1)	(1.3)
Final asset returns	(1.7)	0.0	0.2	0.0	0.0	(1.5)
2017 Costs (February 6, 2017)	\$122.4	\$6.8	(\$2.8)	\$0.9	\$1.0	\$128.3

¹ Qualified Pension results reflect the assumption that NSP-MN costs and Xcel Energy Nuclear costs are determined under the Aggregate Cost Compensation Method. No additional regulatory deferrals have been reflected.

² Estimated impact of updated participant status and compensation data through September 30, 2016, with the primary factors being fewer deaths than expected and 2016 compensation approximately 0.4% larger than expected.

³ Increase assumptions reduced by 0.25% at each age for nonbargaining participants and each service increment for bargaining participants.

⁴ Per capita claims cost increased 5.8% (8.2% pre-65, 5.2% post-65) versus expected increase of 6.0%. Expected Medicare Part D reimbursement for eligible retirees decreased 4.0% versus expected increase of 6.0%, increasing costs by \$0.8 million. Also reflects 1.0% increase versus 6.0% expected increase in PSCo retiree premiums due to bargaining contract methodology (\$0.5 million increase).

⁵ December 31, 2016 discount rates assumed to be equal to the discount rates from Willis Towers Watson BOND:Link model results as of October 31, 2016 plus 25 basis points for approximate month to date rate movement in November. Bond model excludes collateralized bonds.

⁶ Estimate assumes year-end asset values equal estimated November 18, 2016 values for pension and October 31, 2016 values with adjustments for two months of estimated disbursements and contributions for VEBA, which produce full year 2016 returns of approximately 5% for pension and 5% for VEBA. VEBA asset performance also includes impact of lower than expected benefit payments, which increases the estimated year-end asset value and decreases estimated 2017 benefit cost.

⁷ Includes 2017 anticipated settlement charge of \$1.4 million related to expected payments of \$3.0 million.

⁸ Impact of updated participant status and compensation data through November 30, 2016, final benefit payment experience, and the transfer of participants between XEPP and NCE.

Results Exhibits

Benefit cost results are summarized by legal entity and presented in the attached exhibits as follows:

- Exhibit I: Benefit Cost Estimates – Qualified Pension Plans
- Exhibit II: Benefit Cost Estimates – Nonqualified Pension Plans
- Exhibit III: Benefit Cost Estimates – Retiree Medical and Life Insurance Plan
- Exhibit IV: Liabilities – LTD and Workers Compensation
- Exhibit V: Claims and Expenses – LTD and Workers Compensation
- Exhibit VI: Benefit Cost Estimates – LTD and Workers Compensation
- Exhibit VII: Benefit Cost Reconciliation Details – Qualified Pension Plans

Plans Valued

The attached exhibits include results for the following employee benefit plans maintained by Xcel Energy Inc. (Xcel Energy):

- Xcel Energy Pension Plan
- Xcel Energy Inc. Nonbargaining Pension Plan (South) [NCE Nonbargaining Plan]
- New Century Energies Inc. Retirement Plan for SPS Bargaining Unit Employees and Former Nonbargaining Unit Employees [SPS Bargaining Plan]
- New Century Energies Inc. Retirement Plan for PSCo Bargaining Unit Employees and Former Nonbargaining Unit Employees [PSCo Bargaining Plan]
- Xcel Energy Nonqualified Defined Benefit Plan, including:
 - Xcel Energy SERP
 - SPS SERP
 - Employment Agreements
 - Fort St. Vrain Nuclear Operations Personnel Plan
 - NMC SERP Part A
- Xcel Energy Retiree Medical and Life Insurance Plan (including Executive Life Insurance)
- Xcel Energy Workers' Compensation
- Xcel Energy Long-Term Disability (LTD) Income

DATA, ASSUMPTIONS, METHODS AND PLAN PROVISIONS

The fiscal 2017 costs and estimated 2018-2022 costs reflect the following data, assumptions, methods and plan provisions:

Data

Results for 2017-2022 are based on participant data as of January 1, 2016 projected to the end of the year based on status, compensation and benefit changes through November 30, 2016, known retirements for December 2016, and benefit distributions related to the 2016 deferred vested participant lump sum offering. Actual new entrants through November 30, 2016 and expected new entrants through December 31, 2016 are included.

Economic Assumptions

The key assumptions used to determine the actual 2017 and estimated 2018 - 2022 benefit cost results are provided below. The assumptions used to calculate the cost under the aggregate funding method are the same as used to prepare the ASC 715 results, except as noted. Actual asset returns are assumed to equal the expected return on assets assumptions throughout the forecast period. The following primary economic assumptions were used to prepare the results:

	2016 Cost	2017 Estimate (December 6, 2016)	2017 Cost
Benefit Cost			
Discount Rate – ASC 715			
– Xcel Energy Pension Plan	4.64%	4.06%	4.11%
– NCE Nonbargaining Pension Plan	4.48%	3.85%	3.97%
– SPS Bargaining Pension Plan	4.73%	4.21%	4.25%
– PSCo Bargaining Pension Plan	4.71%	4.16%	4.21%
– Nonqualified Pension Plan	4.34%	3.86%	3.99%
– Retiree Medical and Life Insurance Plan	4.65%	4.05%	4.13%
– Workers Compensation and LTD	4.39%	3.84%	3.95%
Expected Return on Assets Assumption – Pension			
– Xcel Energy Pension Plan	7.10%	7.10%	7.10%
– NCE Nonbargaining Pension Plan	6.90%	6.90%	6.90%
– SPS Bargaining Pension Plan	6.75%	6.75%	6.75%
– PSCo Bargaining Pension Plan	6.50%	6.50%	6.50%
– <i>Weighted Average Expected Return</i>	6.87%	6.87%	6.87%
Expected Return on Assets Assumption – VEBA	5.80%	5.80%	5.80%
Discount Rate – Aggregate Cost	7.10%	7.10%	7.10%
Salary Scale	4.00%	3.75%	3.75%
Initial Medical Trend	6.00%	5.50%	5.50%
Ultimate Medical Trend	4.50%	4.50%	4.50%
Year Ultimate Trend is Reached	2019	2019	2019

- The interest rate for converting lump sums to annuities and annuities to lump sums was updated from 4.25% to 4.00% in all years. The pre-PPA lump sum conversion interest rate was updated from 3.25% to 3.00%.
- The interest crediting rate for the 5% cash balance formula was updated from 3.25% to 3.00%. The interest crediting rate for the Retirement Spending Account was updated from 1.50% to 1.75%.
- The HRA trend assumption remains at 2.0%.

Pension Contributions

The forecasts reflect actual 2017 contributions of \$150 million made on January 3, 2017 and planned contributions provided by Xcel Energy for 2018 through 2022. The table below summarizes the amounts assigned to each plan over the forecast period:

	Year					
	2017	2018	2019	2020	2021	2022
Xcel Energy Pension Plan	\$ 110.0	\$ 110.0	\$ 95.0	\$ 95.0	\$ 80.0	\$ 45.0
NCE Nonbargaining Plan	10.0	10.0	20.0	20.0	15.0	15.0
SPS Bargaining Plan	20.0	15.0	15.0	10.0	10.0	7.0
PSCo Bargaining Plan	10.0	15.0	20.0	25.0	45.0	83.0
Total Contribution	\$ 150.0	\$ 150.0	\$ 150.0	\$ 150.0	\$ 150.0	\$ 150.0

- Contributions in 2018 and beyond are assumed to be paid on January 15th and assigned to the prior plan year.

Demographic Assumptions

- Participant counts from January 1, 2016 were adjusted for actual new entrant counts through November 30, 2016, expected new entrants through December 31, 2016, terminations/retirements, and benefit distributions related to the 2016 deferred vested participant lump sum offering as described above under Data. No additional changes in headcount levels are assumed.
- The career average salary scale assumption decreased from 4.00% to 3.75%.
- Mortality assumption reflects additional data through 2014 which generally lowered the rate of mortality improvements

Retiree Medical and Life Insurance Plan – Effects of Health Care Reform

- Our estimates continue to assume the same effects as noted in our 2016 ASC 715 cost report dated April, 2016.

Plan Changes

PPA "greater-of" was extended for NSP bargaining terminations and retirements prior to December 31, 2019

All other plan provisions remain the same as provided in our 2016 benefit cost reports dated April 27, 2016.

ACTUARIAL CERTIFICATION

As requested by Xcel Energy Inc., this report provides results of the actuarial valuations of the Xcel Energy Inc. employee benefit plans indicated above. This report should not be used for other purposes, distributed to others outside Xcel Energy Inc. or relied upon by any other person without prior written consent from Towers Watson Delaware Inc. Except where we expressly agree in writing, this report should not be disclosed or provided to any third party, other than as provided below. In the absence of such consent and an express assumption of responsibility, no responsibility whatsoever is accepted by us for any consequences arising from any third party relying on this report or any advice relating to its contents.

Xcel Energy Inc. may make a copy of this report available to auditors or appropriate governmental agencies of the plan or the plan sponsor, but we make no representation as to the suitability of this report for any purpose other than that for which it was originally provided and accept no responsibility or liability to the auditors in this regard. Xcel Energy Inc. should draw the provisions of this paragraph to the attention of the auditors or appropriate governmental agencies when providing this report to them.

In preparing this valuation, we have relied upon information and data provided to us by Xcel Energy Inc. and other persons or organizations designated by Xcel Energy Inc. An audit of the financial and participant data provided was not performed, but we have checked the data for reasonableness as appropriate based on the purpose of the valuation. The results presented in this report are directly dependent upon the accuracy and completeness of the underlying data and information. Any material inaccuracy in the data, assets, plan provisions or other information provided to us may have produced results that are not suitable for the purposes of this report and such inaccuracies, as corrected by Xcel Energy Inc., may produce materially different results that could require that a revised report be issued.

This valuation reflects our understanding of the relevant provisions of the Pension Protection Act of 2006. The IRS has yet to issue final guidance with respect to certain aspects of this law. It is possible that such guidance may conflict with our understanding of the law and could therefore affect results shown in this report.

The results summarized in this report involve actuarial calculations that require assumptions about future events. We believe the assumptions and methods used in this report are reasonable and appropriate for the purposes for which they have been used. In our opinion, all methods, assumptions and calculations are in accordance with requirements of the Internal Revenue Code and ERISA, and the applicable financial accounting standards, including ASC 712 and 715 and the procedures followed and presentation of results are in conformity with generally accepted actuarial principles and practices.

Assumptions for determining benefit cost results were selected by Xcel Energy Inc. Xcel Energy Inc. uses the standards set out in ASC 715 to calculate pension cost for each plan in total; pension cost for the subsidiaries is calculated based on plan assets allocated to each subsidiary in proportion to the PBO for each subsidiary. Beginning in fiscal 2010, Discontinued Operations is allocated assets in proportion to its PBO, similar to nondiscontinued operations. The gain/(loss) amortization is allocated to each subsidiary in proportion to the gain/(loss) balance for each subsidiary (excluding deferred asset gains and losses). This methodology is consistent with former NSP's methodology since 1998 and has been applied to the former NCE pension plans since January 1, 2001. A similar methodology is used for the ASC 715 costs for the Retiree Medical and Life Plan, except separate asset accounts are used for each subsidiary.

Except as otherwise provided herein, the results presented are based on the data, assumptions, methods and plan provisions outlined in the actuarial valuation reports to determine accounting requirements for the plan for the plan year ending December 31, 2017 and beginning January 1, 2017 to be delivered in the next few weeks. Therefore, the descriptions of the data, assumptions, methods, plan provisions and limitations of the valuation and its use should be considered part of this letter report.



Mr. Richard R. Schrubbe
February 8, 2017

The undersigned consultants with actuarial credentials meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein. Our objectivity is not impaired by any relationship between the Xcel Energy Inc. and our employer, Towers Watson Delaware Inc., a subsidiary of Willis Towers Watson PLC.

NEXT STEPS

If you have any questions or would like to discuss, please contact Jim at 952-842-6354 or Mark at 952-842-6445.

Sincerely,

A handwritten signature in black ink, appearing to read "James W. Shaddy".

James W. Shaddy, ASA
Consulting Actuary

A handwritten signature in black ink, appearing to read "Mark A. Afdahl".

Mark A. Afdahl, FSA
Consulting Actuary

cc: Todd Degrugillier, Xcel Energy Inc.
Darla Figoli, Xcel Energy Inc.
Levi Glines, Xcel Energy Inc.
Kris Lindemann, Xcel Energy Inc.
Ruth Lowenthal, Xcel Energy Inc.
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XCEL ENERGY INC. - Qualified Pension Plans
Benefit Cost by Legal Entity
(\$ in Thousands)

EXHIBIT I
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	Amortizations					January 1 Prepaid (Accrued)	Contribution	PBO
	Service Cost	Interest Cost	Expected Return on Assets	Prior Service Cost	Net (Gain)/Loss			
2018								
Xcel Energy Pension Plan (XEPP)								
Discontinued Operations ¹	-	2,984	(4,546)	-	3,635	39,964	4,354	75,131
Xcel Energy Nuclear	6,400	4,063	(6,192)	44	621	(8,184)	5,926	102,271
NSP - MN	20,900	35,780	(54,441)	1,016	37,314	389,002	52,803	911,223
NSP - WI	4,583	6,181	(9,414)	138	5,605	55,123	9,047	156,133
Xcel Services ²	24,140	25,862	(39,397)	245	14,872	104,285	37,839	653,001
XEPC (former EMI)	-	22	(33)	-	(1)	(100)	31	534
Total XEPP	56,023	74,892	(114,023)	1,443	62,046	580,090	110,000	1,898,293
NCE Non-Bargaining Pension Plan								
Discontinued Operations - Cheyenne	-	147	(217)	-	169	1,674	134	3,870
PSCo	4,508	7,616	(11,196)	1	3,892	18,201	6,888	199,658
SPS	2,821	3,286	(4,829)	-	3,064	27,217	2,978	86,314
Total NCE	7,329	11,049	(16,242)	1	7,125	47,092	10,000	289,842
SPS Bargaining Plan								
SPS	6,696	16,479	(23,682)	-	9,469	125,377	15,000	398,255
Total SPS	6,696	16,479	(23,682)	-	9,469	125,377	15,000	398,255
PSCo Bargaining Plan								
Discontinued Operations - Cheyenne	-	437	(572)	-	450	6,370	153	10,820
PSCo	22,861	42,978	(56,459)	(3,212)	24,226	259,359	14,847	1,052,414
Total PSCo	22,861	43,415	(57,031)	(3,212)	24,676	265,729	15,000	1,063,234
Total Xcel Energy	92,909	145,835	(210,978)	(1,768)	103,316	1,018,288	150,000	3,649,624

¹ Includes NRG, BMG, Viking, Naitro Gas, Utility Engineering, Seren, Quixx, Crockett and QPS

² Includes Eloigne

Assumptions

Discount Rate - U.S. GAAP

XEPP 4.11%

NCE 3.97%

SPS 4.25%

PSCo 4.21%

Discount Rate - Aggregate Normal Cost

Salary Scale 7.10%

Expected Return on Assets 3.75%

XEPP 7.10%

NCE 6.90%

SPS 6.75%

PSCo 6.50%

Assumed Mortality Table

Bargaining Participants

Non-bargaining Participants

See February 8, 2017 letter for additional information on data, assumptions, methods and plan provisions.

Contributions are allocated based on PBO for each legal entity.

RP-2014 Blue Collar projected with generational mortality improvements using an adjusted SOA MP-2016 methodology
RP-2014 White Collar, as adjusted for 2014 Xcel Energy mortality study, projected with generational mortality improvements using an adjusted SOA MP-2016 methodology
See February 8, 2017 letter for additional information on data, assumptions, methods and plan provisions.

WillisTowersWatson

XCEL ENERGY INC. - Qualified Pension Plans
Benefit Cost by Legal Entity
(\$ in Thousands)

EXHIBIT I
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	Amortizations					January 1 Prepaid (Accrued)	Contribution	PBO
	Service Cost	Interest Cost	Expected Return on Assets	Prior Service Cost	Net (Gain)/Loss			
2019								
Xcel Energy Pension Plan (XEPP)								
Discontinued Operations ¹	-	2,899	(4,538)	-	3,577	42,245	3,693	73,008
Xcel Energy Nuclear	6,193	4,202	(6,577)	44	510	(7,194)	5,363	106,020
NSP - MN	20,636	34,752	(54,319)	1,016	35,720	401,236	44,867	887,000
NSP - WI	4,542	6,127	(9,582)	138	5,347	57,077	7,869	155,572
Xcel Services ²	23,569	25,977	(40,649)	245	14,243	116,402	33,181	655,975
XEPC (former EMI)	-	21	(33)	-	1	(57)	27	533
Total XEPP	54,940	73,978	(115,698)	1,443	59,398	609,709	95,000	1,878,108
NCE Non-Bargaining Pension Plan								
Discontinued Operations - Cheyenne	-	141	(218)	-	164	1,709	260	3,711
PSCo	4,307	7,458	(11,510)	1	3,827	20,268	13,753	196,192
SPS	2,728	3,252	(5,020)	-	2,858	25,853	5,987	85,409
Total NCE	7,035	10,851	(16,748)	1	6,849	47,830	20,000	285,312
SPS Bargaining Plan								
SPS	6,622	16,563	(24,495)	-	9,125	131,415	15,000	400,497
Total SPS	6,622	16,563	(24,495)	-	9,125	131,415	15,000	400,497
PSCo Bargaining Plan								
Discontinued Operations - Cheyenne	-	418	(544)	-	436	6,208	194	10,373
PSCo	23,286	43,149	(56,320)	(3,212)	23,421	243,812	19,806	1,057,061
Total PSCo	23,286	43,567	(56,864)	(3,212)	23,857	250,020	20,000	1,067,454
Total Xcel Energy	91,863	144,959	(213,805)	(1,768)	99,229	1,038,974	150,000	3,631,371

¹ Includes NRG, BMG, Viking, Naitro Gas, Utility Engineering, Seren, Quixx, Crockett and QPS

² Includes Eloigne

Assumptions

Discount Rate - U.S. GAAP

XEPP 4.11%

NCE 3.97%

SPS 4.25%

PSCo 4.21%

Discount Rate - Aggregate Normal Cost

Salary Scale 7.10%

Expected Return on Assets 3.75%

XEPP 7.10%

NCE 6.90%

SPS 6.75%

PSCo 6.50%

Assumed Mortality Table

Bargaining Participants

Non-bargaining Participants

RP-2014 Blue Collar projected with generational mortality improvements using an adjusted SOA MP-2016 methodology

RP-2014 White Collar, as adjusted for 2014 Xcel Energy mortality study, projected with generational mortality improvements using an adjusted SOA MP-2016 methodology

See February 8, 2017 letter for additional information on data, assumptions, methods and plan provisions.

Contributions are allocated based on PBO for each legal entity.

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XCEL ENERGY INC. - Qualified Pension Plans
Benefit Cost by Legal Entity
(\$ in Thousands)

	Amortizations					January 1 Prepaid (Accrued)	Contribution	PBO
	Service Cost	Interest Cost	Expected Return on Assets	Prior Service Cost	Net (Gain)/Loss			
2020								
Xcel Energy Pension Plan (XEPP)								
Discontinued Operations ¹	-	2,822	(4,542)	-	3,517	44,000	3,639	70,947
Xcel Energy Nuclear	5,993	4,320	(6,953)	44	424	(6,203)	5,591	108,996
NSP - MN	19,739	33,649	(54,105)	1,016	34,168	408,298	44,111	859,989
NSP - WI	4,318	6,031	(9,700)	138	5,123	58,374	7,870	153,431
Xcel Services ²	22,934	26,003	(41,840)	245	13,694	126,196	33,762	659,228
XEPC (former EMI)	-	21	(34)	-	3	(19)	27	527
Total XEPP	52,984	72,846	(117,174)	1,443	56,929	630,648	95,000	1,852,118
NCE Non-Bargaining Pension Plan								
Discontinued Operations - Cheyenne	-	135	(219)	-	160	1,882	254	3,547
PSCo	4,140	7,288	(11,874)	1	3,775	29,938	13,899	191,363
SPS	2,626	3,208	(5,225)	-	2,687	28,022	6,047	84,469
Total NCE	6,766	10,631	(17,318)	1	6,622	59,842	20,000	279,379
SPS Bargaining Plan								
SPS	6,491	16,621	(24,941)	-	8,797	138,600	10,000	402,214
Total SPS	6,491	16,621	(24,941)	-	8,797	138,600	10,000	402,214
PSCo Bargaining Plan								
Discontinued Operations - Cheyenne	-	400	(518)	-	425	6,092	232	9,927
PSCo	23,663	43,284	(56,188)	(2,650)	22,958	233,294	24,768	1,061,206
Total PSCo	23,663	43,684	(56,706)	(2,650)	23,383	239,386	25,000	1,071,133
Total Xcel Energy	89,904	143,792	(216,139)	(1,206)	95,731	1,068,476	150,000	3,604,844

¹ Includes NRG, BMG, Viking, Naitro Gas, Utility Engineering, Seren, Quixx, Crockett and QPS

² Includes Eloigne

Assumptions

Discount Rate - U.S. GAAP

XEPP 4.11%

NCE 3.97%

SPS 4.25%

PSCo 4.21%

Discount Rate - Aggregate Normal Cost

Salary Scale 7.10%

Expected Return on Assets 3.75%

XEPP 7.10%

NCE 6.90%

SPS 6.75%

PSCo 6.50%

Assumed Mortality Table

Bargaining Participants

Non-bargaining Participants

See February 8, 2017 letter for additional information on data, assumptions, methods and plan provisions.

Contributions are allocated based on PBO for each legal entity.

RP-2014 Blue Collar projected with generational mortality improvements using an adjusted SOA MP-2016 methodology
RP-2014 White Collar, as adjusted for 2014 Xcel Energy mortality study, projected with generational mortality improvements using an adjusted SOA MP-2016 methodology

XCEL ENERGY INC. - Nonqualified Pension Plans
Benefit Cost by Legal Entity
(\$ in Thousands)

EXHIBIT II
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	Amortizations					January 1 Prepaid (Accrued)	Expected Benefit Payments
	Service Cost	Interest Cost	Expected Return on Assets	Prior Service Cost	Net (Gain)/Loss	FAS 88 Settlement ⁴	
2018							
Discontinued Operations ¹	-	29	-	-	(45)	(1,233)	89
Xcel Energy Nuclear	88	49	-	-	15	(1,144)	138
NSP - MN	25	159	-	-	370	(524)	602
NSP - WI	17	30	-	-	14	(634)	73
PSCo ²	41	138	-	-	370	77	466
SPS	23	90	-	-	160	(805)	319
Xcel Services ³	828	1,118	-	227	1,052	(18,558)	3,714
XEPC (former EMI)	-	-	-	-	(3)	(30)	-
Total Xcel Energy	1,022	1,613	-	227	1,933	(22,851)	5,401

¹ Includes NRG, BMG, Viking, Natrogas, Quixx, Seren and UE

² Includes Fort St. Vrain

³ Includes Eloigne

⁴ Settlement accounting may be required if actual lump sum benefit payments exceed the sum of service cost and interest cost. No settlements have been estimated at this time.

Assumptions

Discount Rate 3.99%

Salary Scale 3.75%

Assumed Mortality Table RP-2014 White Collar, as adjusted for 2014 Xcel Energy mortality study, projected with generational mortality improvements using an adjusted SOA MP-2016 methodology

Estimates reflect a 5% load on the projected liabilities to reflect the potential for demographic experience that is less favorable than expected.

See February 8, 2017 letter for additional information on data, assumptions, methods and plan provisions.

2/8/2017

http://natcl.internal.towerswatson.com/clients/609084/RETActuarial-2017/Documents/Projections/01 February/Projections - 02072017.xlsx: Nonqualified

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XCEL ENERGY INC. - Nonqualified Pension Plans
Benefit Cost by Legal Entity
(\$ in Thousands)

EXHIBIT II
Page 3 of 6

	Amortizations					FAS 88 Settlement ⁴	Net Cost	January 1 Prepaid (Accrued)	Expected Benefit Payments
	Service Cost	Interest Cost	Expected Return on Assets	Prior Service Cost	Net (Gain)/Loss				
2019									
Discontinued Operations ¹	-	27	-	-	(40)	-	(13)	(1,128)	86
Xcel Energy Nuclear	91	50	-	-	13	-	154	(1,158)	88
NSP - MN	26	142	-	-	326	-	494	(476)	542
NSP - WI	18	28	-	-	12	-	58	(622)	70
PSCo ²	43	126	-	-	327	-	496	(6)	440
SPS	24	82	-	-	141	-	247	(759)	298
Xcel Services ³	859	1,047	-	133	921	-	2,960	(18,069)	3,383
XEPC (former EMI)	-	-	-	-	(3)	-	(3)	(27)	-
Total Xcel Energy	1,061	1,502	-	133	1,697	-	4,393	(22,245)	4,907

¹ Includes NRG, BMG, Viking, Natrogas, Quixx, Seren and UE

² Includes Fort St. Vrain

³ Includes Eloigne

⁴ Settlement accounting may be required if actual lump sum benefit payments exceed the sum of service cost and interest cost. No settlements have been estimated at this time.

Assumptions

Discount Rate 3.99%

Salary Scale 3.75%

Assumed Mortality Table RP-2014 White Collar, as adjusted for 2014 Xcel Energy mortality study, projected with generational mortality improvements using an adjusted SOA MP-2016 methodology

Estimates reflect a 5% load on the projected liabilities to reflect the potential for demographic experience that is less favorable than expected.

See February 8, 2017 letter for additional information on data, assumptions, methods and plan provisions.

Willis Towers Watson

XCEL ENERGY INC. - Nonqualified Pension Plans
Benefit Cost by Legal Entity
(\$ in Thousands)

EXHIBIT II
Page 4 of 6

	Amortizations					FAS 88 Settlement ⁴	Net Cost	January 1 Prepaid (Accrued)	Expected Benefit Payments
	Service Cost	Interest Cost	Expected Return on Assets	Prior Service Cost	Net (Gain)/Loss				
2020									
Discontinued Operations ¹	-	24	-	-	(36)	-	(12)	(1,029)	83
Xcel Energy Nuclear	94	50	-	-	11	-	155	(1,224)	173
NSP - MN	27	127	-	-	287	-	441	(428)	484
NSP - WI	19	27	-	-	11	-	57	(610)	84
PSCo ²	45	115	-	-	289	-	449	(62)	420
SPS	25	74	-	-	124	-	223	(708)	301
Xcel Services ³	891	966	-	133	806	-	2,796	(17,646)	4,230
XEPC (former EMI)	-	-	-	-	(2)	-	(2)	(24)	-
Total Xcel Energy	1,101	1,383	-	133	1,490	-	4,107	(21,731)	5,775

¹ Includes NRG, BMG, Viking, Natrogas, Quixx, Seren and UE

² Includes Fort St. Vrain

³ Includes Eloigne

⁴ Settlement accounting may be required if actual lump sum benefit payments exceed the sum of service cost and interest cost. No settlements have been estimated at this time.

Assumptions

Discount Rate	3.99%
Salary Scale	3.75%
Assumed Mortality Table	RP-2014 White Collar, as adjusted for 2014 Xcel Energy mortality study, projected with generational mortality improvements using an adjusted SOA MP-2016 methodology
Estimates reflect a 5% load on the projected liabilities to reflect the potential for demographic experience that is less favorable than expected.	
See February 8, 2017 letter for additional information on data, assumptions, methods and plan provisions.	

2/8/2017

http://naict.internal.towerswatson.com/clients/609084/PETActuarial-2017/Documents/Projections/01_February/Projections_-_02072017.xlsx: Nonqualified

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XCEL ENERGY INC. - Postretirement Benefits
Benefit Cost by Legal Entity
(\$ in Thousands)

	Service Cost	Interest Cost	Expected Return on Assets	Amortizations		Net Cost	January 1 Prepaid (Accrued)	Contribution
				Prior Service Cost	Net (Gain)/Loss			
2018								
Discontinued Operations ¹	-	329	(93)	(104)	135	267	(4,512)	707
Xcel Energy Nuclear	14	34	-	49	(14)	83	(716)	17
NSP - MN ²	120	3,201	(227)	(3,085)	1,965	1,974	(53,740)	7,768
NSP - WI	29	559	(33)	(351)	418	622	(6,989)	1,289
PSCo	659	16,187	(21,343)	(6,178)	3,705	(6,970)	29,173	-
SPS ³	860	1,639	(2,299)	(404)	(580)	(784)	(13,948)	-
Xcel Services ³	42	1,145	(30)	(557)	838	1,438	(13,326)	1,630
XEPC (former EMI)	-	1	-	1	(4)	(2)	(114)	6
Total Xcel Energy	1,724	23,095	(24,025)	(10,629)	6,463	(3,372)	(64,172)	11,417

¹Includes NRG, BMG, Viking, Natrogas, Cheyenne, Quixx and UE.

²Includes Elcigne and Seren.

³Includes Executive Life Insurance benefits.

Assumptions

Discount Rate 4.13%

Expected Return on Assets 5.80%

Medical Trend Initial (2017) 5.50%

Ultimate 4.50%

2019

Assumed Mortality Reached Year Ultimate Reached

Bargaining:

RPH-2014 Blue Collar headcount-weighted table adjusted for Xcel Energy mortality study, projected with generational mortality improvements using an adjusted SOA MP-2016 methodology.

RPH-2014 White Collar headcount-weighted table adjusted for Xcel Energy mortality study, projected with generational mortality improvements using an adjusted SOA MP-2016 methodology.

Non-bargaining:

Contributions for PSCo and SPS are assumed equal to the net cost, but not less than zero. Contributions for other legal entities are assumed equal to the expected benefit payments. See February 8, 2017 letter for additional information on data, assumptions, methods, and plan provisions.

2/8/2017

http://natcl.internal.towerswatson.com/clients/609084/RET/Actuarial-2017/Documents/Projections/01 February/Projections - 02072017.xlsx: PRW

XCEL ENERGY INC. - Postretirement Benefits
Benefit Cost by Legal Entity
(\$ in Thousands)

	Service Cost	Interest Cost	Expected Return on Assets	Amortizations			Net Cost	January 1 Prepaid (Accrued)	Contribution
				Expected Return on Assets	Prior Service Cost	Net (Gain)/Loss			
2019									
Discontinued Operations ¹	-	314	(99)		(110)	130	235	(4,072)	696
Xcel Energy Nuclear	13	35	-		57	(14)	91	(782)	20
NSP - MN ²	110	3,028	(240)		(3,075)	1,889	1,712	(47,946)	7,415
NSP - WI	27	531	(35)		(351)	401	573	(6,322)	1,258
PSCo	552	15,599	(20,764)		(5,399)	3,567	(6,445)	36,143	-
SPS ³	839	1,613	(2,249)		(466)	(555)	(818)	(13,164)	-
Xcel Services ³	37	1,128	(32)		(565)	804	1,372	(13,134)	1,595
XEPC (former EMI)	-	1	-		-	(4)	(3)	(106)	6
Total Xcel Energy	1,578	22,249	(23,419)		(9,909)	6,218	(3,283)	(49,383)	10,990

¹Includes NRG, BMG, Viking, Naitrogas, Cheyenne, Quixx and UE.

²Includes Elbigne and Seren.

³Includes Executive Life Insurance benefits.

Assumptions

Discount Rate 4.13%
Expected Return on Assets 5.80%

Medical Trend
Initial (2017)
Ultimate

5.50%
4.50%
2019

Year Ultimate Reached
Assumed Mortality Table
Bargaining:

RPH-2014 Blue Collar headcount-weighted table adjusted for Xcel Energy mortality study, projected with generational mortality improvements using an adjusted SOA
MP-2016 methodology.

RPH-2014 White Collar headcount-weighted table adjusted for Xcel Energy mortality study, projected with generational mortality improvements using an adjusted SOA
MP-2016 methodology.

Non-bargaining:

Contributions for PSCo and SPS are assumed equal to the net cost, but not less than zero. Contributions for other legal entities are assumed equal to the expected benefit payments.
See February 8, 2017 letter for additional information on data, assumptions, methods, and plan provisions.

XCEL ENERGY INC. - Postretirement Benefits
Benefit Cost by Legal Entity
(\$ in Thousands)

EXHIBIT III
Page 4 of 6

	Amortizations					Net Cost	January 1 Prepaid (Accrued)	Contribution
	Service Cost	Interest Cost	Expected Return on Assets	Prior Service Cost	Net (Gain)/Loss			
2020								
Discontinued Operations ¹	-	299	(105)	(111)	124	207	(3,611)	662
Xcel Energy Nuclear	12	37	-	95	(13)	131	(853)	22
NSP - MN ²	102	2,858	(254)	(3,014)	1,802	1,494	(42,243)	7,202
NSP - WI	25	504	(37)	(337)	383	538	(5,637)	1,219
PSCO	428	14,977	(20,143)	(3,762)	3,410	(5,090)	42,588	-
SPS ³	821	1,588	(2,201)	(425)	(528)	(745)	(12,346)	-
Xcel Services ³	35	1,113	(34)	(365)	767	1,516	(12,911)	1,513
XEPC (former EMI)	-	1	-	-	(4)	(3)	(97)	1
Total Xcel Energy	1,423	21,377	(22,774)	(7,919)	5,941	(1,952)	(35,110)	10,619

¹Includes NRG, BMG, Viking, Natrogas, Cheyenne, Quixx and UE.

²Includes Eloigne and Seren.

³Includes Executive Life Insurance benefits.

Assumptions

Discount Rate 4.13%
Expected Return on Assets 5.80%

Medical Trend
Initial (2017)

Ultimate

Year Ultimate Reached

Assumed Mortality Table

Bargaining:

Non-bargaining:

Contributions for PSCO and SPS are assumed equal to the net cost, but not less than zero. Contributions for other legal entities are assumed equal to the expected benefit payments.

See February 8, 2017 letter for additional information on data, assumptions, methods, and plan provisions.

RPH-2014 Blue Collar headcount-weighted table adjusted for Xcel Energy mortality study, projected with generational mortality improvements using an adjusted SOA MP-2016 methodology.
RPH-2014 White Collar headcount-weighted table adjusted for Xcel Energy mortality study, projected with generational mortality improvements using an adjusted SOA MP-2016 methodology.

**XCEL ENERGY INC. - LTD and Workers' Compensation
Benefit Cost Estimates by Legal Entity
(\$ in Thousands)**

EXHIBIT VI

Fiscal Year Ending	2016 Actual	2017 Budget	2018 Budget	2019 Budget	2020 Budget	2021 Budget	2022 Budget
ASC 712							
<u>Discount Rate- Workers' Compensation</u>	4.46%	3.95%	3.95%	3.95%	3.95%	3.95%	3.95%
<u>Former NSP - Workers' Compensation</u> ¹							
MN/SD	1,162	741	448	325	304	283	261
MI/WI	(115)	25	9	9	9	9	8
Subtotal	1,047	766	457	334	313	292	269
<u>Former NCE - Workers' Compensation</u> ¹							
Colorado - PSCo	9	155	75	58	55	54	52
<u>Deductible States - Workers' Compensation</u>							
Deductible States - SPS (KS, OK, NM, and TX)	-	-	-	-	-	-	-
Total Xcel Energy Workers' Compensation	1,056	921	532	392	368	346	321
<u>Discount Rate - LTD Income</u>	4.46%	3.95%	3.95%	3.95%	3.95%	3.95%	3.95%
<u>LTD Income</u>							
Discontinued Operations - Cheyenne	172	7	4	3	2	2	1
Discontinued Operations ²	(80)	50	23	21	20	19	18
NSP-MN	(684)	639	286	270	256	240	225
NSP-WI	58	134	59	56	53	51	46
PSCo	302	122	65	49	35	28	22
SPS	(6)	45	27	22	16	14	8
Utility Engineering	55	3	2	1	2	1	1
Xcel Services	(557)	23	12	9	8	5	6
XEPC	5	3	-	1	-	-	-
Total Xcel Energy LTD Income	(735)	1,026	478	432	392	360	327
Total Xcel Energy ASC 712	321	1,947	1,010	824	760	706	648

¹ Results for former NSP states include income replacement and medical benefits as well as reserve for bankrupt insurers.
Colorado results include reserve for bankrupt insurers.

² Includes NRG, BMG, Viking and Natrogas.

See February 8, 2017 letter for additional information on data, assumptions, methods, and plan provisions.

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Xcel Energy Inc. - Qualified Pension Plans

Benefit Cost Reconciliation Details
(\$ in Thousands)

Exhibit VII

	ASC 715 ¹				NSP-MN & Xcel Energy Nuclear		
	XEPP	NCE	SPS	PSCo	Total	ASC 715 ¹	Aggregate Cost 20-Year Amortization Method
Initial 2017 Estimate (May 13, 2016)	79,121	9,723	9,275	29,294	127,413	45,329	27,712
Estimated demographic experience ²	2,677	517	199	(1,002)	2,391	1,472	663
Decrease salary increase assumption ³	(2,641)	(255)	(527)	(845)	(4,268)	(1,479)	(800)
Extend "greater-of" for NSP bargaining contract	744	-	-	-	744	547	80
Mortality assumption	(1,063)	38	(574)	(1,672)	(3,271)	(680)	(270)
Updated retiree claims and participant contributions ⁴	-	-	-	-	-	-	-
Discount rates ⁵	6,573	967	1,494	4,421	13,455	3,637	(4)
Estimated 2016 asset performance ⁶	1,427	191	121	446	2,185	787	560
Pension contributions increased from \$125M to \$150M	(1,362)	-	(324)	-	(1,686)	(737)	-
Updated 2017 Estimate (December 6, 2016)	85,476	11,181	9,664	30,642	136,963	48,876	27,941
Final demographic experience ⁷	3,097	(799)	333	(506)	2,125	943	(84)
Final discount rates	(552)	(219)	(115)	(406)	(1,292)	(293)	3
Final 2016 asset returns	(798)	(133)	(64)	(160)	(1,155)	(385)	1,049
2017 Costs (February 6, 2017)	87,223	10,030	9,818	29,570	136,641	49,141	28,909

¹ Does not include potential settlement charges.

² Estimated impact of updated participant status and compensation data through September 30, 2016, with the primary factors being fewer deaths than expected and 2016 compensation approximately 0.4% larger than expected

³ Increase assumptions reduced by 0.25% at each age for nonbargaining participants and each service increment for bargaining participants.

⁴ Per capita claims cost increased 5.8% (8.2% pre-65, 5.2% post-65) versus expected increase of 6.0%. Expected Medicare Part D reimbursement for eligible retirees decreased 4.0% versus expected increase of 6.0%, increasing costs by \$0.8 million. Also reflects 1.0% increase versus 6.0% expected increase in PSCo retiree premiums due to bargaining contract methodology (\$0.5 million increase).

⁵ December 31, 2016 discount rates assumed to be equal to the discount rates from Willis Towers Watson BOND:Link model results as of October 31, 2016 plus 25 basis points for approximate month to date rate movement in November. Bond model excludes collateralized bonds.

⁶ Estimate assumes year-end asset values equal estimated November 18, 2016 values, which produce full year 2016 returns of 5%.

⁷ Impact of updated participant status and compensation data through November 30, 2016, final benefit payment experience, and the transfer of participants between XEPP and NCE.

See February 8, 2017 letter for additional information on data, assumptions, methods and plan provisions.